

2010 Washburn County Yellow River Loosestrife Project



**Washburn County Land Conservation Department
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Resource Problem to be addressed

Purple loosestrife has been documented in Washburn County since the 1980's. By far the largest infestations are in the Yellow River watershed and along the Namekagon River corridor. The National Park Service staff has worked hard over the years to manage the infestation along the Namekagon River, primarily through cutting and treating stems with herbicide. The Land and Water Conservation Department has focused beetle efforts on the Yellow River, both on the main channel and tributary areas.

While bio-control efforts have been successful, there are still limitations to the number of beetles that can be raised each year and how much control they can provide. Utilizing additional management techniques have been necessary to accelerate the process. This summer, the AIS Coordinator implemented a new method of control to combat purple loosestrife in the Yellow River Corridor. Cutting and treating stems with herbicide was done extensively within infested areas.

Landowner Involvement and Meetings

Landowner involvement was crucial with this project to access the purple loosestrife stands. Letters and postcards were sent to all landowners along the river to educate them of loosestrife and of the cutting and treating methods that were going to be administered. An informational meeting was held by the AIS Coordinator, and some interested landowners attended to learn more about the project. Newspaper articles were also submitted to inform the public. Many landowners responded back granting permission to access to their property to control loosestrife, while others volunteered to help cut and spray.

Description of Work

Working with DNR Water and Wildlife staff, a goal was to focus chemical treatment on the stretch of the river from Tozer Lake Road culverts to the Hector Dam Road Bridge. This stretch is a little over 2 miles long and approximately 1.23 miles was treated (see attached map of treated areas).

An Aquatic Plant Management permit was received from the WI DNR for herbicide application and *Glyphosate 4 Plus* (Rodeo) was the herbicide used in the project. The amount of hand-spraying used 1.25 gallons of concentrated herbicide, which was diluted to 26:2 for application. On average, 1 bottle of herbicide was used each work day. A blue dye was added to the herbicide in order to see what areas were cut. Aerial Maps of loosestrife stands were available to determine what areas would be controlled. DNR staff and volunteers worked with the AIS Coordinator in designated areas along the Yellow River. Each person was equipped with a pruner, rubber gloves and bottle of herbicide. Waders were recommended, although not everyone was in the water working. Due to high water, canoes and kayaks were used to cut and treat stems along the edge of stands, while others walked directly on top of the loosestrife clumps. Cut stems were bagged and hauled to an upland location to be dried and burned. A few days after treatment, it was noticeable what areas had been sprayed because brown stalks were evident. Interested landowners on the river were given a copy of the permit

and herbicide to treat infested areas along their shoreline. DNR Wildlife staff also worked in the same section of the river, using the same chemical treatment method on all of the shoreline on DNR property.

Bio-Control Management

This was the first year the Land Conservation Department used the cut and spray method as an alternative control method. *Galarucella* beetles have been the control method for the last 3 years (prior to this, beetles were also placed near this reach by DNR staff and volunteers). Fortunately, there was evidence of beetle activity in the areas that were sprayed. Some people saw beetles and larvae on the stems as they were working, and some saw plants that had been eaten. That is a good sign, considering none were ever released at those sites (only upstream about 2 miles). Some of the past beetle release sites have shown a significant decrease in purple loosestrife, and one area specifically is almost completely gone. Chemical treatment was not used where beetle activity was observed; volunteers removed flower heads instead to lower seed production and leave forage for the remaining beetles and larvae.

Several areas have developed self sustaining populations of beetles and are providing a location to harvest adults for the rearing cages. Approximately 33,000 beetles were released this year within the corridor. As time allows, it is the intent to continue beetle release efforts, along with chemical treatment to help control stands of purple loosestrife.

Results and Recommendations

1. Due to the thick, long-established stands of plants, a target area for control was cut back to just about half of the initial reach (see attached map of treated areas).
2. Landowner cooperation was excellent in allowing access to the river and the use of herbicide.
3. More landowner participation in actual treatment would have been helpful.
4. Bagging cut plants required a lot of volunteer time. It would be nice to review whether the threat of drifting plants re-rooting and loss of seeds warrants bagging and removal from the site. With such a large infestation, maybe this threat is not significant compared to the seed production from remaining uncut and untreated plants. Volunteers could treat a bigger area each day if time was not spent on cut plant retrieval and bagging.
5. Discussions should continue with wildlife staff and other agencies working on loosestrife suppression to refine techniques. Thought should be given to the best way to combine chemical and biological methods, such as chemically treating large infestations in year one to reduce the number of plants, and then maintaining the smaller infestations by releasing beetles in year two (or some similar cycle).